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(Twice Amended) 15. A resistor array comprising:

a plurality of resistors each comprising a metallic bulk base;

a plurality of electrodes composed of conductive material disposed directly on said metallic bulk base for connecting each of said resistors to external circuits wherein said metallic bulk base between every two of said electrodes having a precisely controlled distance for providing a precisely defined resistance for each of said resistors.

(Twice Amended) 16. The resistor array of claim 15 further comprising:

at least an electrode layer of a different conductive material disposed on each of said electrodes.

(Twice Amended) 17. The resistor array of claim 15 further comprising:

a plurality of scribing lines disposed between said resistors for scribing said resistor array into a plurality of resistors each comprising at least two electrodes for connecting each of said resistors to external circuits.

(Twice Amended) 18. The resistor array of claim 15 wherein:

said metallic bulk base comprising a nickel-copper alloy.

(Twice Amended) 19. The resistor array of claim 15 wherein:

each of said electrodes further comprises a copper layer and a tin-lead alloy layer.

C1

(Twice Amended) 20. The resistor array of claim 15 wherein:

said precisely defined resistance for each of said resistors ranging approximately from one milli-ohm to one ohm.

(Twice Amended) 21. The resistor array of claim 15 wherein:

said metallic bulk base of each of said plurality of resistors having a thickness ranging approximately from 0.05 to 0.5 millimeters and a length ranging approximately from 1.0 to 7.0 millimeters.

(Twice Amended) 22. The resistor array of claim 15 wherein:

each of said plurality of electrodes disposed directly on said metallic bulk base having a width and length ranging approximately from 0.1 to 3.2 millimeter, a height ranging approximately from 0.05 to 0.5 millimeters and distance ranging approximately from 0.4 to 6.2 millimeters between every two electrode columns.

(Twice Amended) 23. A resistor array comprising:

a plurality of resistors each comprising a metallic bulk base;

a plurality of column-shaped electroplated electrodes disposed directly on said metallic bulk base for connecting each of said resistors to external circuits and having a precisely controlled distance between every two of said electrodes for providing a precisely defined resistance for each of said resistors.

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(Twice Amended) 24. The resistor array of claim 23 further comprising:

a plurality of scribing lines disposed between said resistors for scribing said resistor array into a plurality of resistors each comprising at least two electrodes for connecting each of said resistors to external circuits.

(Twice Amended) 25. The resistor array of claim 23 wherein:

said metallic bulk base comprising a nickel-copper alloy.

(Twice Amended) 26. The resistor array of claim 23 wherein:

each of said plurality of column-shaped electroplated electrodes disposed directly on said metallic bulk base further comprises a copper layer and a tin-lead alloy layer.

(Twice Amended) 27. The resistor array of claim 23 wherein:

said precisely defined resistance for each of said resistors ranging approximately from one milli-ohm to one ohm.

(Twice Amended) 28. The resistor array of claim 23 wherein:

said metallic bulk base of each of said plurality of resistors having a thickness ranging approximately from 0.05 to 0.5 millimeters and a length ranging approximately from 1.0 to 7.0 millimeters.

C1

(Twice Amended) 29. The resistor array of claim 23 wherein:

each of said plurality of column-shaped electrodes disposed directly on said metallic bulk base having a width and length ranging approximately from 0.1 to 3.2 millimeter, a height ranging approximately from 0.05 to 0.5 millimeters and distance ranging approximately from 0.4 to 6.2 millimeters between every two electrodes.

(Twice Amended) 30. A resistor comprising:

a metallic bulk base;

at least two electrodes composed of a conductive material disposed directly on said metallic bulk base for connecting said resistor to external circuits and having a precisely controlled distance between said two electrodes for providing a precisely defined resistance for said resistor.

(Twice Amended) 31. The resistor of claim 26 further comprising:

at least an electrode layer of a different conductive material disposed on each of said electrodes.

(Twice Amended) 32. The resistor of claim 30 wherein:

said metallic bulk base comprising a nickel-copper alloy.

(Twice Amended) 33. The resistor of claim 30 wherein:

each of said electrodes further comprises a copper layer and a tin-lead alloy layer.

June 18, 2003

C1

(Twice Amended) 34. The resistor of claim 30 wherein:

said precisely defined resistance for said resistor ranging approximately from one milli-ohm to one ohm.

(Twice Amended) 35. The resistor of claim 30 wherein:

said metallic bulk base of said resistor having a thickness ranging approximately from 0.05 to 0.5 millimeters and a length ranging approximately from 1.0 to 7.0 millimeters.

(Twice Amended) 36. The resistor of claim 30 wherein:

each of said electrodes disposed directly on said metallic bulk base having a width and length ranging approximately from 0.1 to 3.2 millimeter, a height ranging approximately from 0.05 to 0.5 millimeters and distance ranging approximately from 0.4 to 6.2 millimeters between every two electrode columns.

(Twice Amended) 37. A resistor comprising:

a metallic bulk base;

a least two column-shaped electroplated electrodes disposed directly on said metallic bulk base for connecting said resistor to external circuits and having a precisely controlled distance between said electrodes for providing a precisely defined resistance for said resistor.

C1

(Twice Amended) 38. The resistor of claim 37 wherein:

said metallic bulk base comprising a nickel-copper alloy.

(Twice Amended) 39. The resistor of claim 37 wherein:

each of said column-shaped electroplated electrodes further comprises a copper layer and a tin-lead alloy layer.

(Twice Amended) 40. The resistor of claim 37 wherein:

said precisely defined resistance for said resistor ranging approximately from one milli-ohm to one ohm.

(Twice Amended) 41. The resistor of claim 37 wherein:

said metallic bulk base of said resistor having a thickness ranging approximately from 0.05 to 0.5 millimeters and a length ranging approximately from 1.0 to 7.0 millimeters.

(Twice Amended) 42. The resistor of claim 37 wherein:

each of said column-shaped electrodes disposed directly on said metallic bulk base having a width and length ranging approximately from 0.1 to 3.2 millimeter, a height ranging approximately from 0.05 to 0.5 millimeters and distance ranging approximately from 0.4 to 6.2 millimeters between every two electrodes.